

# Actuarial Section



## State Actuary's Certification Letter



WASHINGTON STATE LEGISLATURE  
Office of the State Actuary

November 7, 2005

Sandra J. Matheson, Director  
Department of Retirement Systems  
P.O. Box 48380  
Olympia, Washington 98504-8380

Dear Sandy:

The purpose of this letter is to:

- (1) Certify the actuarial adequacy of contributions being made to the pension plans administered by your department, the State of Washington, and participating political subdivisions;
- (2) Discuss the funding of these plans; and
- (3) Certify that our other submissions meet the GFOA certification standards for actuarial reporting.

The information in this letter pertains to the Public Employees' Retirement System (PERS), Teachers' Retirement System (TRS), School Employees' Retirement System (SERS), Law Enforcement Officers' and Fire Fighters' Retirement System (LEOFF), Washington State Patrol Retirement System (WSPRS), Judicial Retirement System (JRS), and Judges' Retirement System (Judges). The state contributes to other pension plans which are not administered by your agency.

The Office of the State Actuary performs annual actuarial valuations for all systems listed above. The most recent valuation date for these systems was September 30, 2004.

The assumptions used in our actuarial valuation fall into two categories: economic and demographic. The economic assumptions were prescribed by the Legislature as of July 1, 2001, and include salary increases, inflation, the investment earnings rate, and population growth. The Pension Funding Council is scheduled to review these assumptions every four years. Demographic assumptions include such things as retirement, mortality, termination, and disability rates. These rates are derived by our office from studying the actual experience of these systems. These studies are reviewed annually and studied in depth every six years. The legislature adopted the demographic assumptions effective April 1, 2002, based on our 1995-2000 Experience Study.

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The material pension changes made during the 2004 Legislative Session that became effective during (and after) the 2004 Fiscal Year were disclosed in last year's annual report.

Pension benefit legislation enacted during the 2005 Legislative Session is summarized below (chapter and law year references are provided parenthetically):

- PERS, TRS, and SERS Plan 2/3 members may opt out of plan membership if deemed to be terminally ill with less than five years to live (Chapter 131, Laws of 2005).
- The PERS Plan 1 Veterans definition was expanded to include conflicts in the Persian Gulf and Afghanistan (Chapter 255, Laws of 2005).
- Emergency Medical Technicians (EMT) in PERS may transfer into LEOFF Plan 2 and have the option of transferring their past service (Chapter 459, Laws of 2005).
- The TRS Plan 1 certified Educational Staff Associates (ESA) benefit formula was improved by annualizing salaries when calculating average final compensation so part-time ESAs may receive proportionate retirement benefits (Chapter 23, Laws of 2005).
- LEOFF Plan 1 ex-spouse benefits were enhanced by allowing continuance after the death of the member (Chapter 62, Laws of 2005).
- LEOFF Plan 2 disability benefits were enhanced by removing the actuarial reduction for commencement prior to normal retirement (Chapter 451, Laws of 2005).

There were no other material pension benefit changes during the 2005 Session.

Pension funding legislation was adopted during the 2005 legislative session (Chapter 370, Laws of 2005), which creates a short-term change in funding policy. The policy is to adopt annual contribution rates over a four-year "phase-in" period from 2005-2009, to suspend payments on the Plan 1 UAAL in PERS and TRS during the 2005-2007 biennium and to delay recognition of the cost of future gain-sharing benefits until the 2007-2009 biennium.

The estimated value of future gain-sharing benefits is included in the liabilities for accounting disclosure purposes, but not for funding purposes.

In 1989, the Legislature adopted the objective of amortizing the Unfunded Actuarial Accrued Liability (UAAL) for PERS 1, TRS 1, and LEOFF 1 by June 30, 2024. Subsequent benefit increases are funded over this same period. The funding method for these three plans is a modified aggregate method where the normal cost is imputed from PERS 2/3, TRS 2/3, and LEOFF 2, respectively. The amortization calls for payments as a level percentage of system payroll. Employer contributions to the PERS 1 and TRS 1 unfunded liability were suspended for the 2003-2005 biennium (Chapter 11, Laws of 2003, E1) and for the 2005-2007 biennium (Chapter 370, Laws of 2005). The amortization date, however, remains unchanged. During fiscal year 2005 the systems were funded according to this method and, if continued following resumption of contributions, the UAAL will be amortized as scheduled.



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LEOFF 1 does not have a UAAL at this time.

PERS 2, TRS 2/3, SERS 2/3, LEOFF 2, and WSP use the aggregate funding method which does not develop a UAAL. These systems are well funded at this time.

The Judicial and Judges Systems are funded on a pay-as-you-go basis. Both systems are closed to new members and have very small liabilities when compared to other state plans. Although the Judicial System is poorly funded, the Judges System is well funded, having built up assets from the past. It is expected that the state can continue to meet its obligations by funding on a pay-as-you-go basis because of the small size of the obligations in these two plans.

In performing these valuations, we relied on unaudited member and beneficiary data provided by your department. Both the Department of Retirement Systems and the Office of the State Actuary performed a series of edits to check the quality of the data. In our opinion, the data is sufficient and reliable for the purpose of annual valuations. Unaudited asset and financial information was provided from three sources: the Department of Retirement Systems, the State Investment Board, and the Washington State Treasurer's Report.

The following schedules (or updates to them) were prepared by this office for inclusion in the 2005 Comprehensive Annual Financial Report:

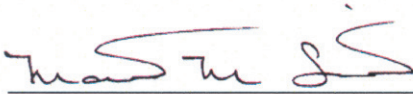
- Schedules of Funding Progress
- Schedule of Employer Contributions
- Summary of Actuarial Assumptions and Methods
- Schedules of Active Member Valuation Data
- Schedules of Retirees and Beneficiaries Added to and Removed from Rolls
- Solvency Tests
- Analysis of Selected Experience

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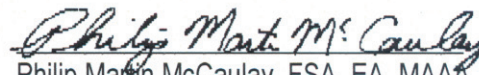
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The actuarial assumptions and methods prescribed by the Legislature were used for reporting funding items. GASB disclosure items were provided in accordance with GASB statements 25 and 27. As a result, disclosure items may not match comparable funding items disclosed in our most recent actuarial valuation report. The funding policy and reporting items are discussed in the Financial Section of the CAFR under Notes to the Required Supplementary Information, as well as in the section Funding Policy.

Respectfully submitted,



Matthew M. Smith, FCA, EA, MAAA  
State Actuary



Philip Martin McCaulay, FSA, EA, MAAA  
Senior Pension Actuary

## Summary of Plan Provisions

A narrative summary of retirement plans managed by DRS is provided in Section B of Note 2 in the Financial Section of this CAFR. A tabular summary of key plan provisions as of June 30, 2005, is provided below.

Plan	Membership Eligibility	Vesting	Retirement Eligibility	Benefit
<b>PERS Plan 1</b> (By 9/30/77)	State employees, elected officials, employees of local governments, legislative committees, community/technical colleges, classified employees of school districts, district/municipal court judges, and some employees of the Supreme, Appeals, and Superior Courts	After five years of eligible service	After 30 years of service, or at age 60 with five years service, or at age 55 with 25 years of service	2% of average final compensation (AFC) per year of service
<b>PERS Plan 2</b> (On or after 10/1/77)	Same as PERS Plan 1, except classified school district employees; new employees hired on or after 3/1/02 at state agencies and higher education, or on or after 9/1/02 at all other employers, must choose Plan 2 or Plan 3	After five years of eligible service	At age 65 with five years of service, or an actuarially reduced benefit at age 55 with 20 years of service	2% of AFC per year of service
<b>PERS Plan 3</b> (Varies by employer)	Same as PERS Plan 2; new employees hired on or after 3/1/02 at state agencies and higher education, or on or after 9/1/02 at all other employers, must choose Plan 2 or Plan 3	Varies	At age 65 if vested or an actuarially reduced benefit at age 55 with 10 years of service (defined benefit portion)	1% of AFC per year of service (defined benefit portion). The defined contribution portion depends on the member's contribution level and on investment performance.
<b>SERS Plan 2</b> (On or after 9/1/00)	All classified employees of school districts or educational service districts	After five years of eligible service	At age 65 with five years of service, or an actuarially reduced benefit at age 55 with 20 years of service	2% of AFC per year of service
<b>SERS Plan 3</b> (On or after 9/1/00)	All classified employees of school districts or educational service districts	Varies	At age 65 if vested or an actuarially reduced benefit at age 55 with 10 years of service (deferred benefit portion)	1% of AFC per year of service (defined benefit portion). The defined contribution portion depends on the member's contribution level and on investment performance.
<b>TRS Plan 1</b> (By 9/30/77)	All certificated public school employees who work in an instructional, administrative or supervisory capacity	After five years of eligible service	Any age with 30 years of service, or at age 60 with five years of service or at age 55 with 25 years of service	2% of AFC per year of service
<b>TRS Plan 2</b> (On or after 10/1/77 and by 6/30/96)	All certificated public school employees who work in an instructional, administrative or supervisory capacity	After five years of eligible service	At age 65 with five years of service, or an actuarially reduced benefit at age 55 with 20 years of service	2% of AFC per year of service
<b>TRS Plan 3</b> (On or after 7/1/96)	All certificated public school employees who work in an instructional, administrative or supervisory capacity	Varies	At age 65 if vested or an actuarially reduced benefit at age 55 with 10 years of service (defined benefit portion)	1% of AFC per year of service (defined benefit portion). The defined contribution portion depends on the member's contribution level and on investment performance.
<b>LEOFF Plan 1</b> (By 9/30/77)	All full-time, fully compensated law enforcement officers and fire fighters	After five years of eligible service	At age 50 with five years of service	20 years of service = 2% of final average salary (FAS) per year of service 10-19 = 1.5% FAS per year of service 5-9 = 1% FAS per year of service
<b>LEOFF Plan 2</b> (On or after 10/1/77)	All full-time, fully compensated law enforcement officers and fire fighters	After five years of eligible service	At age 53 with five years of service or a benefit at age 50 with 20 years of service reduced 3% for each year under age 53	2% of FAS per year of service
<b>WSPRS Plan 1</b> (On or after 8/1/47 and by 12/31/02)	Commissioned employees of the Washington State Patrol	After five years of eligible service	At age 55 or after 25 years of service	2% of average final salary per year of service
<b>WSPRS Plan 2</b> (On or after 1/1/03)	Commissioned employees of the Washington State Patrol	After five years of eligible service	At age 55 or after 25 years of service	2% of average final salary per year of service
<b>JRS</b> (On or after 8/9/71 and by 6/30/88 - New judges on or after 7/1/88 join PERS Plan 2 or 3)	Judges elected or appointed to the Supreme Court, the Court of Appeals and Superior Courts	After 15 years of service	At age 60	15 years of service = 3.5% of AFC per year of service 10-14 = 3% of AFC per year of service
<b>Judges</b> (By 8/8/71)	Judges elected or appointed to the Supreme Court, the Court of Appeals and Superior Courts	After 12 years of service	At age 70 with 10 years of service or any age with 18 years of service	1/2 of the monthly salary

DRS publishes handbooks describing the rights and benefits for each system and plan, including disability and survivor benefits. These handbooks are provided to members by their employers. They are also available from DRS and are on the DRS Web site at [www.drs.wa.gov](http://www.drs.wa.gov).

# Summary of Actuarial Assumptions and Methods

## 1. Actuarial Assumptions and Methods Selection:

**Economic Assumptions and Methods:** Developed in accordance with Washington State law and the Pension Funding Council.

### Demographic Assumptions and Methods:

Derived by the Washington State Office of the State Actuary and are based on the 1995-2000 Experience Studies (adopted April 1, 2002). The latest actuarial valuation includes additional assumptions for subsequent events and law changes.

**2. Investment Return:** 8.0% per annum

## 3. Mortality Tables:

Mortality rates are based on the RP-2000 Combined Healthy Table published by the Society of Actuaries. These rates are adjusted by an age set back or set forward to better reflect expected mortality for the particular group. In addition, a minimum rate is also applied to disabled mortality.

Class	Contributing Members and Members Retired from Service	Disabled Members
PERS	RP-2000 Combined Healthy Table	RP-2000 Combined Healthy Table; males set forward six years, minimum 5%; females set forward six years, minimum 3.5%
SERS	RP-2000 Combined Healthy Table; males unadjusted; females set back two years	RP-2000 Combined Healthy Table; males set forward five years, minimum 3%; females set forward two years, minimum 3%
TRS	RP-2000 Combined Healthy Table; males set back two years; females set back two years	RP-2000 Combined Healthy Table; males set forward five years, minimum 3%; females set forward two years, minimum 1.75%
LEOFF	RP-2000 Combined Healthy Table	RP-2000 Combined Healthy Table; males set forward two years, minimum 0.5%; females set forward two years, minimum 0.5%
WSPRS	RP-2000 Combined Healthy Table	RP-2000 Combined Healthy Table; males set forward two years, minimum 0.5%; females set forward two years, minimum 0.5%
JRS	RP-2000 Combined Healthy Table	RP-2000 Combined Healthy Table; males set forward six years, minimum 5%; females set forward six years, minimum 3.5%



4. Retirement (page 1 of 3): Probabilities of service retirement are illustrated in the following tables:

**PERS Plan 1**  
**Probabilities of Service Retirement**  
**Among Members Eligible to Retire**

Age	Male	Female
50	64%	40%
51	57%	43%
52	52%	37%
53	52%	33%
54	52%	52%
55	22%	26%
56	22%	18%
57	22%	18%
58	22%	22%
59	22%	37%
60	22%	18%
61	22%	22%
62	40%	37%
63	26%	26%
64	30%	26%
65	49%	46%
66-69	30%	26%
70	100%	100%

**SERS Plan 2/3**  
**Probabilities of Service Retirement**  
**Among Members Eligible to Retire**

Age	Service Less Than 30 Years		Service Greater Than or Equal to 30 Years	
	Male	Female	Male	Female
54	2%	2%	4%	4%
55	5%	5%	7%	7%
56	5%	5%	7%	7%
57	5%	5%	7%	7%
58	10%	5%	14%	7%
59	10%	5%	14%	7%
60	14%	14%	21%	21%
61	14%	18%	21%	27%
62	33%	30%	50%	45%
63	26%	26%	39%	39%
64	79%	82%	90%	90%
65	52%	49%	52%	49%
66	30%	30%	30%	30%
67	22%	26%	22%	26%
68	22%	26%	22%	26%
69	100%	100%	100%	100%

**PERS Plan 2/3**  
**Probabilities of Service Retirement**  
**Among Members Eligible to Retire**

Age	Service Less Than 30 Years		Service Greater Than or Equal to 30 Years	
	Male	Female	Male	Female
55	5%	5%	7%	7%
56	5%	5%	7%	7%
57	5%	5%	7%	7%
58	10%	5%	14%	7%
59	10%	5%	14%	7%
60	14%	14%	21%	21%
61	14%	18%	21%	27%
62	33%	30%	50%	45%
63	26%	26%	39%	39%
64	79%	82%	90%	90%
65	52%	49%	52%	49%
66	30%	30%	30%	30%
67	22%	26%	22%	26%
68	22%	26%	22%	26%
69	26%	22%	26%	22%
70	100%	100%	100%	100%

**TRS Plan 1**  
**Probabilities of Service Retirement**  
**Among Members Eligible to Retire**

Age	Service Less Than 30 Years		Service Greater Than or Equal to 30 Years	
	Male	Female	Male	Female
54	25%	20%	40%	30%
55	20%	20%	35%	30%
56	20%	20%	35%	30%
57	20%	20%	40%	30%
58	20%	25%	45%	30%
59	20%	25%	45%	30%
60	20%	20%	60%	35%
61	45%	35%	60%	55%
62	30%	25%	60%	50%
63	25%	20%	60%	50%
64	45%	45%	90%	90%
65	45%	35%	90%	90%
66	35%	30%	90%	90%
67	30%	35%	90%	90%
68	30%	25%	90%	90%
69	100%	100%	100%	100%

4. Retirement (page 2 of 3):

**TRS Plan 2/3**  
**Probabilities of Service Retirement**  
**Among Members Eligible to Retire**

Age	Service Less Than 30 Years		Service Greater Than or Equal to 30 Years	
	Male	Female	Male	Female
54	5%	3%	8%	5%
55	5%	5%	8%	8%
56	5%	10%	8%	15%
57	5%	10%	8%	15%
58	5%	10%	8%	15%
59	20%	15%	30%	23%
60	40%	20%	60%	30%
61	30%	30%	45%	45%
62	30%	30%	45%	45%
63	60%	50%	90%	75%
64	50%	50%	50%	50%
65	50%	30%	50%	30%
66	50%	25%	50%	25%
67	50%	25%	50%	25%
68	50%	40%	50%	40%
69	100%	100%	100%	100%

**LEOFF**  
**Probabilities of Service Retirement**  
**Among Members Eligible to Retire**

Age	Plan 1 Rate	Plan 2 Rate
50	9%	10%
51	7%	10%
52	8%	10%
53	8%	16%
54	10%	19%
55	16%	24%
56	16%	25%
57	16%	25%
58	23%	33%
59	23%	33%
60	23%	33%
61	28%	37%
62	28%	37%
63	28%	37%
64	40%	48%
65	100%	100%

**WSPRS Plan 1/2**  
**Probabilities of Service Retirement**  
**Among Members Eligible to Retire**

Age	Rate
45-50	31%
51-55	23%
56-59	28%
60+	100%

**JRS**  
**Probabilities of Service Retirement**  
**Among Members Eligible to Retire**

Age	Rate
60	1%
61	1%
62	14%
63	14%
64	18%
65	30%
66	33%
67	18%
68	18%
69	18%
70	22%
71	22%
72	22%
73	22%
74	22%
75	100%

## 4. Retirement (page 3 of 3):

**PERS Plan 1**  
**Probabilities of Disablement**

Age	Male	Female
20	0.0000%	0.0000%
25	0.0000%	0.0000%
30	0.0000%	0.0000%
35	0.0310%	0.0319%
40	0.0762%	0.0710%
45	0.1481%	0.1431%
50	0.2542%	0.3023%
55	0.8240%	0.6411%
60*	1.1701%	0.6502%
64	1.1701%	0.5495%

\* Plan 1 we assume no disabilities for ages 60+.

**PERS Plan 2/3**  
**Probabilities of Disablement**

Age	Male	Female
20	0.0000%	0.0000%
25	0.0052%	0.0000%
30	0.0115%	0.0056%
35	0.0156%	0.0194%
40	0.0235%	0.0275%
45	0.0476%	0.0467%
50	0.0922%	0.1003%
55	0.2630%	0.2782%
60	0.7603%	0.7681%
64	1.0244%	1.0271%

**SERS Plan 2/3**  
**Probabilities of Disablement**

Age	Male	Female
20	0.0000%	0.0000%
25	0.0000%	0.0000%
30	0.0000%	0.0048%
35	0.0081%	0.0176%
40	0.0258%	0.0164%
45	0.0568%	0.0201%
50	0.1102%	0.0738%
55	0.3428%	0.2876%
60	0.9292%	0.5589%
64	1.2272%	0.6589%

**WSPRS Plan 1/2**  
**Probabilities of Disablement**

The assumed rate of disability is 0.1% at all ages.

**TRS Plan 1**  
**Probabilities of Disablement**

Age	Male	Female
20	0.0013%	0.0014%
25	0.0091%	0.0092%
30	0.0187%	0.0190%
35	0.0321%	0.0326%
40	0.0428%	0.0434%
45	0.0944%	0.0957%
50	0.1634%	0.1656%
55	0.3347%	0.3393%
60*	0.4686%	0.4750%
64	0.7213%	0.7311%

\* Plan 1 we assume no disabilities for ages 60+.

**TRS Plan 2/3**  
**Probabilities of Disablement**

Age	Male	Female
20	0.0003%	0.0003%
25	0.0024%	0.0019%
30	0.0048%	0.0040%
35	0.0083%	0.0068%
40	0.0111%	0.0091%
45	0.0244%	0.0201%
50	0.0422%	0.0347%
55	0.0866%	0.0712%
60	0.1212%	0.0997%
64	0.1865%	0.1534%

**LEOFF Plan 1 and Plan 2**  
**Probabilities of Disablement**

Age	Plan 1 Rate	Plan 2 Rate	Plan 2 Rate
	Male & Female	Duty	Nonduty
20	0.10%	0.09%	0.00%
25	0.10%	0.09%	0.00%
30	0.80%	0.09%	0.00%
35	1.49%	0.09%	0.00%
40	2.35%	0.09%	0.01%
45	4.24%	0.09%	0.02%
50	7.34%	0.09%	0.05%
55	10.35%	0.09%	0.10%
60	12.17%	0.09%	0.10%

**JRS-Probabilities of Disablement**

A 1 percent rate of disability is assumed at all ages after ten years of service.

**5. Other Terminations of Employment (page 1 of 2):** Probabilities of termination are illustrated in the following tables.

**PERS Plan 1 and Plan 2/3  
General Employment Turnover  
Probabilities of Termination**

Years of Service	Male	Female
0	25.90%	26.39%
1	15.46%	16.72%
2	10.20%	11.72%
3	7.69%	9.25%
4	6.39%	7.69%
5	5.31%	6.53%
6	4.35%	5.87%
7	4.07%	5.31%
8	3.73%	4.69%
9	3.54%	4.11%
10	3.25%	3.87%
11	3.10%	3.54%
12	3.05%	3.15%
13	2.86%	3.10%
14	2.76%	3.00%
15	2.66%	2.86%
16	2.37%	2.62%
17	2.13%	2.27%
18	1.83%	1.98%
19	1.49%	1.73%
20	1.14%	1.44%
21	0.95%	1.14%
22	0.75%	0.95%
23	0.60%	0.80%
24	0.55%	0.55%
25	0.50%	0.45%
26+	0.40%	0.40%

**SERS Plan 2/3  
General Employment Turnover  
Probabilities of Termination**

Years of Service	Male	Female
0	25.90%	19.45%
1	16.09%	12.87%
2	11.54%	10.07%
3	10.07%	7.60%
4	8.52%	6.58%
5	7.28%	5.97%
6	6.06%	5.31%
7	5.59%	5.21%
8	4.93%	4.83%
9	4.64%	4.64%
10	4.26%	4.50%
11	4.02%	4.45%
12	3.83%	4.40%
13	3.73%	4.40%
14	3.25%	4.21%
15	2.96%	4.26%
16	2.66%	3.78%
17	2.42%	3.44%
18	2.03%	3.10%
19	1.59%	2.62%
20	1.24%	2.03%
21	1.14%	1.59%
22	0.85%	1.29%
23	0.65%	0.85%
24	0.65%	0.75%
25	0.50%	0.75%
26+	0.50%	0.75%



## 5. Other Terminations of Employment (page 2 of 2):

### TRS Plan1 and Plan 2/3 General Employment Turnover Probabilities of Termination

Years of Service	Male	Female
0	9.65%	10.00%
1	6.00%	7.00%
2	4.00%	5.50%
3	4.00%	4.50%
4	3.50%	4.00%
5	3.00%	3.50%
6	2.20%	3.00%
7	2.10%	2.60%
8	2.00%	2.00%
9	1.90%	1.95%
10	1.80%	1.90%
11	1.80%	1.70%
12	1.00%	1.40%
13	1.00%	1.40%
14	1.00%	1.40%
15	1.00%	1.40%
16	0.95%	1.10%
17	0.90%	0.90%
18	0.80%	0.90%
19	0.70%	0.90%
20	0.50%	0.50%
21	0.50%	0.50%
22	0.50%	0.50%
23	0.50%	0.50%
24	0.50%	0.50%
25	0.50%	0.50%
26+	0.50%	0.50%

### WSPRS Plan 1/2 General Employment Turnover Probabilities of Termination

Years of Service	Probability
0-4	2.43%
5-9	1.38%
10-14	0.87%
15-19	0.64%
20-24	0.19%
25+	0.00%

### LEOFF Plan 1 and Plan 2 General Employment Turnover Probabilities of Termination

Years of Service	Plan 1	Plan 2
0	10.43%	10.34%
1	4.69%	4.60%
2	2.37%	2.28%
3	2.08%	1.99%
4	1.98%	1.89%
5	1.94%	1.85%
6	1.94%	1.85%
7	1.94%	1.85%
8	1.67%	1.58%
9	1.67%	1.58%
10	1.67%	1.58%
11	1.42%	1.33%
12	1.42%	1.33%
13	1.42%	1.33%
14-16	0.99%	0.90%
17-28	0.70%	0.61%
29+	0.00%	0.00%

### JRS Other Rates of Termination Probabilities of Termination

A 2 percent rate of termination is assumed for the first ten years of service.

**6. Future Salaries (page 1 of 2):** The following tables indicate the scale of relative salary values used to estimate future salaries for valuation purposes. In addition to increases in salary due to promotions and longevity, there is an assumed 4.5 percent per annum rate of increase in the general salary level of the membership.

**PERS Plan 1 and Plan 2/3  
Merit Salary Increases**

Years of Service	Percent Increase	Final Salary over Current Salary
1	6.1%	1.275
2	4.8%	1.201
3	3.8%	1.146
4	2.9%	1.104
5	2.1%	1.073
6	1.3%	1.051
7	1.0%	1.038
8	0.8%	1.027
9	0.6%	1.019
10	0.4%	1.013
11	0.3%	1.009
12	0.2%	1.006
13	0.1%	1.004
14	0.1%	1.003
15	0.1%	1.002
16	0.1%	1.001
17+	0.0%	1.000

**TRS Plan 1 and Plan 2/3  
Merit Salary Increases**

Years of Service	Percent Increase	Final Salary over Current Salary
1	6.2%	1.476
2	4.4%	1.390
3	4.2%	1.331
4	3.5%	1.278
5	3.1%	1.235
6	2.7%	1.197
7	2.6%	1.166
8	2.3%	1.136
9	2.1%	1.111
10	1.9%	1.088
11	1.7%	1.068
12	1.6%	1.050
13	1.4%	1.033
14	0.9%	1.019
15	0.8%	1.010
16	0.2%	1.002
17+	0.0%	1.000

**SERS Plan 2/3  
Merit Salary Increases**

Years of Service	Percent Increase	Final Salary over Current Salary
1	7.0%	1.280
2	3.9%	1.196
3	2.8%	1.151
4	2.3%	1.120
5	2.2%	1.095
6	1.5%	1.071
7	1.2%	1.055
8	1.0%	1.043
9	0.8%	1.032
10	0.7%	1.024
11	0.7%	1.017
12	0.3%	1.010
13	0.3%	1.007
14	0.2%	1.004
15	0.1%	1.002
16	0.1%	1.001
17+	0.0%	1.000

**LEOFF Plan 1 and Plan 2  
Merit Salary Increases**

Years of Service	Percent Increase	Final Salary over Current Salary
1	11.7%	1.810
2	8.1%	1.621
3	6.6%	1.499
4	4.5%	1.406
5	3.2%	1.346
6	2.5%	1.304
7	2.2%	1.272
8	2.0%	1.245
9	2.0%	1.221
10	2.0%	1.197
11	1.9%	1.173
12	1.8%	1.151
13	1.7%	1.131
14	1.6%	1.112
15	1.6%	1.095
16	1.6%	1.077
17	1.6%	1.060
18	1.6%	1.044
19	1.4%	1.027
20	1.3%	1.013
21+	0.0%	1.000

6. Future Salaries (page 2 of 2):

**WSPRS Plan 1/2  
Merit Salary Increases**

Years of Service	Percent Increase	Final Salary over Current Salary
1	6.0%	1.678
2	6.0%	1.583
3	6.0%	1.493
4	6.0%	1.409
5	6.0%	1.329
6	6.0%	1.254
7	1.3%	1.183
8	1.3%	1.168
9	1.3%	1.153
10	1.3%	1.138
11	1.3%	1.123
12	1.3%	1.109
13	1.3%	1.095
14	1.3%	1.081
15	1.3%	1.067
16	1.3%	1.053
17	1.3%	1.040
18	1.3%	1.026
19	1.3%	1.013
20	0.0%	1.000
21+	0.0%	1.000

**JRS  
Future Salaries**

General salary levels are assumed to increase 4.5% per year.

**Relative Salary Values**

	PERS/SERS	TRS	LEOFF	WSPRS	JRS
Annual Percent Increase	5.81%	5.44%	5.81%	5.81%	4.50%
Attributed to Growth in Active Group Size	1.25%	0.90%	1.25%	1.25%	0.00%
Attributed to the Effects of Inflation on Salaries	4.50%	4.50%	4.50%	4.50%	4.50%

## 7. Other Specific Assumptions that Have a Material Impact on Valuation Results:

- Members of PERS Plan 1 increase their Average Final Compensation by an average of up to 5 percent by cashing out sick leave or annual leave pay, or by increasing overtime.
- Members of TRS Plan 1 increase their Average Final Compensation by an average of up to 1 percent by cashing out sick leave or annual leave pay, or by increasing overtime.
- LEOFF Plan 1 post-retirement increases are assumed to be 3.5 percent each year.
- Members of WSPRS Plan 1 increase their Average Final Compensation by an average of up to 7.5 percent by cashing out sick leave or annual leave pay, or by increasing overtime.
- Other assumptions include the recognition of service earned in another plan (portability), the probability of a vested terminated member not withdrawing his or her contributions from the plan, the probability of being married, military service, single life annuity refund on death, and beneficiary age. More details on these and other assumptions can be obtained from the Office of the State Actuary.

## 8. Change in Assumptions:

- The gain-sharing interest adjustments were updated for each plan 3 to reflect the current service in the plans 3 versus plans 2.
- LEOFF Plan 2 assumptions were modified to value the enhanced disability benefits.
- LEOFF Plan 2 and WSPRS duty death assumptions were modified to be a flat rate of 0.02% per year.

## 9. Actuarial Cost Method:

Valuation assets are at market value with gains and losses recognized on a graded scale over an eight-year period. Additionally, the actuarial value of assets may not exceed 130%, nor drop below 70%, of the market value of assets. JRS and Judges use the market value of assets for valuation assets.

### PERS Plan 1, TRS Plan 1, LEOFF Plan 1, JRS, and Judges:

Funding (Actual Contributions): A variation of the Aggregate Cost Method is used. The contribution toward the UAAL has been developed in the valuation as a level percentage of expected future covered payrolls which will amortize the UAAL over the period to June 30, 2024. While the LEOFF Plan 1 UAAL is fully funded no contributions are required. JRS and Judges are funded on a pay-as-you-go basis.

Disclosure (Annual Required Contributions): The funding method described in the previous paragraph for PERS Plan 1, TRS Plan 1, and LEOFF Plan 1 is not an acceptable method for the GASB Statement Number 25 disclosures. In order to meet GASB Statement Number 25 requirements, the Entry Age cost method has been used for these plans. The UAAL is amortized as a level dollar amount over the applicable amortization period. For PERS, TRS and LEOFF the end of the amortization period is June 30, 2024. For JRS and Judges, the end of the amortization period is December 31, 2008.

### PERS Plan 2/3, SERS Plan 2/3, TRS Plan 2/3, LEOFF Plan 2, and WSPRS Plan 1/2:

The Aggregate Actuarial Cost Method is used to calculate the contribution rates. Under this method the unfunded actuarial present value of fully projected benefits is amortized over the projected earnings of the active group. The entire contribution is normal cost, and no UAAL exists. All gains and losses are amortized over future salaries of current active members.

The value of future gain-sharing benefits for PERS, TRS and SERS were excluded for funding purposes, but included for GASB purposes.



### **10. Change in Funding Policy:**

Pension funding legislation adopted in 2005:

- Delayed recognition of gain-sharing benefits for PERS, TRS and SERS for funding purposes until 2007.
- Suspended Plan 1 UAAL contributions for the 2005-07 biennium.
- Adopted annual contribution rates over a four-year “phase in” period from 2005-09.

### **11. Material Changes in Benefit Provisions and Contribution Rates:**

The GASB disclosure contribution rates are based on the latest actuarial valuations as of September 30, 2004.

The funding (or actual) contribution rates in effect at the close of the fiscal year were based on the 2003 actuarial valuations in accordance with funding policy. The rates include appropriate adjustments for subsequent law changes.

The following laws enacted in 2005 had an immediate impact on the latest actuarial valuation contribution rates:

- All plans of PERS, TRS, SERS Pension Funding (Chapter 370, Laws of 2005)
- PERS Plan 1 Veterans (Chapter 255, Laws of 2005)
- PERS Plan 1 EMTs into LEOFF Plan 2 (Chapter 459, Laws of 2005)
- TRS Plan 1 part-time ESAs (Chapter 23, Laws of 2005)
- LEOFF Plan 1 Ex-spouse survivor benefit (Chapter 62, Laws of 2005)
- LEOFF Plan 2 Disability (Chapter 451, Laws of 2005)

## Additional Actuarial Schedules

### Schedule of Active Member Valuation Data: PERS Plan 1

Valuation Date	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
9/30/04	17,829	\$862.6	\$48,383	1.1%
9/30/03	19,740	945.1	47,876	1.7%
9/30/02	21,737	1,023.4	47,080	4.1%
9/30/01	23,981	1,084.6	45,226	3.2%
12/31/00	25,833	1,132.2	43,827	4.2%
12/31/99	28,168	1,184.3	42,045	3.6%

Source: Washington State Office of the State Actuary

### Schedule of Active Member Valuation Data: PERS Plan 2

Valuation Date	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
9/30/04	118,572	\$5,340.3	\$45,038	2.7%
9/30/03	117,262	5,142.5	43,855	3.5%
9/30/02	116,939	4,952.6	42,352	4.0%
9/30/01	128,955	5,249.4	40,707	3.7%
12/31/00	126,428	4,964.2	39,265	19.1%
12/31/99	168,214	5,546.2	32,971	3.8%

Source: Washington State Office of the State Actuary

### Schedule of Active Member Valuation Data: PERS Plan 3

Valuation Date	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
9/30/04	19,855	\$880.3	\$44,335	(1.1%)
9/30/03	17,548	786.6	44,823	(1.8%)
9/30/02	15,509	707.8	45,638	n/a
9/30/01*	--	--	--	--
12/31/00*	--	--	--	--
12/31/99*	--	--	--	--

\* PERS Plan 3 became effective on March 1, 2002.

Source: Washington State Office of the State Actuary

### Schedule of Active Member Valuation Data: SERS Plan 2

Valuation Date	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
9/30/04	20,424	\$482.1	\$23,604	2.8%
9/30/03	21,504	493.9	22,967	6.4%
9/30/02	22,870	493.8	21,593	6.9%
9/30/01	24,063	485.9	20,193	(1.3)%
12/31/00	25,714	526.3	20,466	n/a
12/31/99*	--	--	--	--

\* SERS Plan 2 became effective on September 1, 2000.

Source: Washington State Office of the State Actuary

### Schedule of Active Member Valuation Data: SERS Plan 3

Valuation Date	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
9/30/04	29,430	\$686.2	\$23,315	1.1%
9/30/03	27,710	638.7	23,051	4.8%
9/30/02	26,921	591.9	21,988	3.1%
9/30/01	24,284	517.8	21,324	(3.4)%
12/31/00	22,011	485.8	22,073	n/a
12/31/99*	--	--	--	--

\* SERS Plan 3 became effective on September 1, 2000

Source: Washington State Office of the State Actuary

### Schedule of Active Member Valuation Data: TRS Plan 1

Valuation Date	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
9/30/04	9,862	\$616.1	\$62,470	0.8%
9/30/03	11,175	692.3	61,954	4.1%
9/30/02	12,456	741.1	59,496	3.9%
9/30/01	13,971	799.7	57,243	3.0%
6/30/00	17,222	957.2	55,580	5.8%
6/30/99	18,737	984.4	52,540	1.3%

Source: Washington State Office of the State Actuary

### Schedule of Active Member Valuation Data: TRS Plan 2

Valuation Date	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
9/30/04	7,470	\$414.9	\$55,540	2.2%
9/30/03	7,637	414.9	54,333	6.3%
9/30/02	7,809	399.2	51,123	5.3%
9/30/01	8,056	391.2	48,563	5.0%
6/30/00	8,356	386.3	46,230	7.5%
6/30/99	8,663	372.7	43,022	2.2%

Source: Washington State Office of the State Actuary

### Schedule of Active Member Valuation Data: TRS Plan 3

Valuation Date	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
9/30/04	49,302	\$2,463.0	\$49,958	2.3%
9/30/03	47,263	2,308.1	48,836	5.3%
9/30/02	45,798	2,123.6	46,369	4.6%
9/30/01	44,193	1,958.3	44,312	2.4%
6/30/00	38,280	1,657.1	43,288	5.6%
6/30/99	35,284	1,445.9	40,979	0.7%

Source: Washington State Office of the State Actuary

### Schedule of Active Member Valuation Data: LEOFF Plan 1

Valuation Date	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
9/30/04	848	\$63.8	\$75,222	4.6%
9/30/03	991	71.3	71,924	3.2%
9/30/02	1,147	79.9	69,667	5.6%
9/30/01	1,315	86.7	65,959	4.2%
12/31/00	1,499	94.9	63,296	4.3%
12/31/99	1,743	105.8	60,683	3.1%

Source: Washington State Office of the State Actuary

### Schedule of Active Member Valuation Data: LEOFF Plan 2

Valuation Date	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
9/30/04	14,754	\$1,019.5	\$69,098	4.1%
9/30/03	14,560	966.6	66,388	3.2%
9/30/02	14,011	901.6	64,347	5.2%
9/30/01	13,585	830.6	61,139	2.9%
12/31/00	13,133	780.2	59,410	4.2%
12/31/99	12,713	725.0	57,031	4.3%

Source: Washington State Office of the State Actuary

### Schedule of Active Member Valuation Data: WSPRS Plan 1

Valuation Date	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
9/30/04	997	\$61.9	\$62,042	0.3%
9/30/03	1,045	64.6	61,848	2.4%
9/30/02	1,035	62.5	60,422	3.1%
9/30/01	1,027	60.2	58,633	1.5%
12/31/00	1,013	58.5	57,745	0.4%
12/31/99	968	55.7	57,496	4.8%

Source: Washington State Office of the State Actuary

### Schedule of Active Member Valuation Data: WSPRS Plan 2

Valuation Date	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
9/30/04	60	\$2.7	\$44,206	7.8%
9/30/03	34	1.4	41,018	n/a
9/30/02*	-	-	-	-
9/30/01*	-	-	-	-
12/31/00*	-	-	-	-
12/31/99*	-	-	-	-

\* WSPRS Plan 2 became effective on January 1, 2003.

Source: Washington State Office of the State Actuary



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**Schedule of Active Member Valuation Data: JRS**


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Valuation Date	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
9/30/04	19	\$2.4	\$124,801	0.1%
9/30/03	21	2.6	124,636	2.4%
9/30/02	24	2.9	121,741	6.3%
9/30/01	26	3.0	114,475	2.6%
12/31/00	32	3.6	111,570	6.1%
12/31/99	38	4.0	105,196	2.2%

Source: Washington State Office of the State Actuary

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**Schedule of Active Member Valuation Data: Judges**


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Valuation Date	Active Members	Annual Payroll in Millions	Average Annual Pay	Annualized % Increase in Average Pay
9/30/04	-	\$0.0	\$0	n/a
9/30/03	-	0.0	0	n/a
9/30/02	1	0.1	134,584	2.3%
9/30/01	1	0.1	131,558	6.4%
12/31/00	1	0.1	123,600	3.0%
12/31/99	1	0.1	120,000	7.1%

Source: Washington State Office of the State Actuary

**Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: PERS Plan 1**

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	Percentage Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
09/30/04	2,508	\$61,107,155	2,312	\$22,315,395	54,568	\$867,079,469	\$15,890	6.4%
09/30/03	2,661	63,493,857	2,295	21,236,351	54,372	815,176,602	14,993	7.3%
09/30/02	2,783	62,818,651	2,315	20,053,126	54,006	759,744,392	14,068	7.8%
09/30/01	2,077	44,457,501	1,700	14,141,440	53,538	704,757,211	13,164	6.3%
12/31/00	2,831	59,251,651	2,185	17,226,292	53,161	663,195,163	12,475	9.0%
12/31/99	2,680	52,982,694	2,113	16,128,342	52,515	608,698,282	11,591	7.7%

Source: Washington State Office of the State Actuary

**Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: PERS Plan 2**

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	Percentage Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
09/30/04	1,460	\$14,389,517	258	\$1,585,538	12,106	\$95,405,344	\$7,881	18.0%
09/30/03	1,403	12,591,831	240	1,365,574	10,904	80,863,349	7,416	19.3%
09/30/02	1,328	10,886,277	238	1,489,346	9,741	67,775,431	6,958	19.5%
09/30/01	855	6,840,039	131	707,695	8,651	56,726,796	6,557	15.3%
12/31/00	1,319	9,807,863	157	868,467	7,927	49,210,077	6,208	25.5%
12/31/99	1,198	8,229,229	118	549,264	6,765	39,204,885	5,795	27.3%

Source: Washington State Office of the State Actuary

**Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: PERS Plan 3**

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	Percentage Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
09/30/04	140	\$660,151	4	\$17,401	222	\$1,068,252	\$4,812	154.7%
09/30/03	77	375,280	--	--	86	419,481	4,878	859.8%
09/30/02	9	43,707	--	--	9	43,707	4,856	n/a
09/30/01*	--	--	--	--	--	--	--	--
12/31/00*	--	--	--	--	--	--	--	--
12/31/99*	--	--	--	--	--	--	--	--

\*PERS Plan 3 became effective on March 1, 2002.

Source: Washington State Office of the State Actuary

**Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: SERS Plan 2**

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	Percentage Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
09/30/04	370	\$2,399,840	9	\$25,759	1,097	\$7,032,456	\$6,411	53.8%
09/30/03	307	1,968,085	8	45,290	736	4,573,302	6,214	76.5%
09/30/02	251	1,550,754	5	19,458	437	2,591,035	5,929	150.3%
09/30/01	165	884,752	1	1,873	191	1,035,001	5,419	583.5%
12/31/00	27	151,432	--	--	27	151,432	5,609	n/a
12/31/99*	--	--	--	--	--	--	--	--

\*SERS Plan 2 became effective on September 1, 2000.

Source: Washington State Office of the State Actuary

### Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: SERS Plan 3

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	Percentage Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
09/30/04	177	\$570,787	2	\$3,717	481	\$1,432,100	\$2,977	68.6%
09/30/03	124	376,893	3	8,584	306	849,635	2,777	80.3%
09/30/02	109	272,549	2	3,471	185	471,143	2,547	137.8%
09/30/01	78	198,145	--	--	78	198,145	2,540	n/a
12/31/00*	--	--	--	--	--	--	--	--
12/31/99*	--	--	--	--	--	--	--	--

\*SERS Plan 3 became effective on September 1, 2000.

Source: Washington State Office of the State Actuary

### Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: TRS Plan 1

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	Percentage Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
09/30/04	1,724	\$45,066,813	955	\$13,060,274	34,624	\$666,008,994	\$19,235	6.5%
09/30/03	1,667	41,501,938	960	11,973,348	33,855	625,084,100	18,464	6.5%
09/30/02	1,892	46,113,665	939	11,361,709	33,148	587,202,226	17,715	7.9%
09/30/01	3,524	81,519,141	1,168	13,045,875	32,195	544,358,707	16,908	17.5%
06/30/00	1,799	38,290,541	880	9,273,313	29,839	463,256,486	15,525	8.2%
06/30/99	1,677	34,602,902	898	8,961,508	28,920	427,968,688	14,798	7.6%

Source: Washington State Office of the State Actuary

### Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: TRS Plan 2

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	Percentage Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
09/30/04	183	\$2,463,176	13	\$105,183	1,127	\$13,398,162	\$11,888	23.9%
09/30/03	151	1,770,105	17	133,929	957	10,809,534	11,295	21.1%
09/30/02	120	1,493,131	6	50,461	823	8,927,586	10,848	22.8%
09/30/01	204	2,339,594	14	153,589	709	7,267,477	10,250	50.9%
06/30/00	126	1,299,148	5	32,227	519	4,814,556	9,277	38.9%
06/30/99	90	902,554	4	24,541	398	3,466,085	8,709	37.8%

Source: Washington State Office of the State Actuary

### Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: TRS Plan 3

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	Percentage Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
09/30/04	160	\$941,453	4	\$31,834	541	\$2,827,124	\$5,226	50.4%
09/30/03	105	578,041	3	9,313	385	1,879,859	4,883	47.3%
09/30/02	81	360,835	1	6,282	283	1,276,593	4,511	42.7%
09/30/01	113	527,667	2	6,706	203	894,795	4,408	150.8%
06/30/00	42	180,129	--	--	92	356,823	3,879	101.6%
06/30/99	40	145,317	--	--	50	176,974	3,539	475.8%

Source: Washington State Office of the State Actuary

**Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: LEOFF Plan 1**

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	Percentage Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
09/30/04	252	\$9,912,303	196	\$6,146,955	8,110	\$277,017,151	\$34,157	2.5%
09/30/03	234	9,466,933	167	5,043,126	8,054	270,247,173	33,554	3.3%
09/30/02	259	9,948,573	166	4,995,289	7,987	261,664,183	32,761	5.4%
09/30/01	233	8,351,533	119	3,479,510	7,894	248,160,932	31,437	5.7%
12/31/00	325	11,645,461	168	4,566,907	7,780	234,869,646	30,189	6.1%
12/31/99	348	11,397,460	159	4,062,564	7,623	221,408,074	29,045	6.0%

Source: Washington State Office of the State Actuary

**Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: LEOFF Plan 2**

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	Percentage Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
09/30/04	120	\$2,577,269	4	\$58,849	432	\$7,698,642	\$17,821	51.4%
09/30/03	77	1,551,039	5	33,065	316	5,083,630	16,087	46.2%
09/30/02	61	1,069,822	1	11,964	244	3,476,883	14,250	48.1%
09/30/01	44	747,153	3	20,400	184	2,347,816	12,760	48.6%
12/31/00	45	610,415	2	15,024	143	1,579,593	11,046	66.4%
12/31/99	23	271,079	3	31,542	100	949,552	9,496	38.6%

Source: Washington State Office of the State Actuary

**Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: WSPRS Plan 1**

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	Percentage Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
09/30/04	40	\$1,426,848	13	\$273,255	762	\$27,245,683	\$35,755	7.1%
09/30/03	28	1,222,157	11	216,943	735	25,438,609	34,610	7.1%
09/30/02	35	1,156,113	13	194,199	718	23,743,788	33,069	7.4%
09/30/01	36	1,440,257	12	224,122	696	22,105,141	31,760	9.0%
12/31/00	37	1,367,942	12	105,489	672	20,271,907	30,167	8.6%
12/31/99	49	1,507,418	14	231,872	647	18,670,760	28,857	9.2%

Source: Washington State Office of the State Actuary

**Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: JRS**

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		Average Annual Allowance	Percentage Increase in Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
09/30/04	5	\$355,654	7	\$399,709	127	\$8,525,718	\$67,132	1.8%
09/30/03	6	367,945	8	415,446	129	8,373,681	64,912	1.4%
09/30/02	4	229,792	7	294,080	131	8,258,774	63,044	2.1%
09/30/01	6	411,383	3	126,097	134	8,090,219	60,375	6.6%
12/31/00	7	406,024	8	228,527	131	7,588,432	57,927	4.2%
12/31/99	7	252,731	9	464,254	132	7,284,962	55,189	(0.7)%

Source: Washington State Office of the State Actuary



### Schedule of Retirees and Beneficiaries Added to and Removed from Rolls: Judges

Year Ended	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances	Average Annual Allowance	Percentage Increase in Annual Allowance
09/30/04	1	\$39,168	2	\$111,861	16	\$625,584	\$39,099	(10.4)%
09/30/03	2	94,021	3	20,715	17	698,277	41,075	11.7%
09/30/02	1	37,131	1	74,261	18	624,971	34,721	(5.6%)
09/30/01	--	--	--	--	18	662,102	36,783	--
12/31/00	--	--	--	--	18	662,102	36,783	--
12/31/99	--	--	1	5,427	18	662,102	36,783	(0.8)%

Source: Washington State Office of the State Actuary

### Solvency Test: PERS Plan 1

(dollars in millions)

Accrued Liabilities (Entry Age Cost Method):					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
9/30/04	\$1,343.2	\$8,827.4	\$2,684.9	\$12,855.5	\$9,928.2	100%	97%	0%
9/30/03	1,411.3	8,327.8	2,952.8	12,691.9	10,227.3	100%	100%	17%
9/30/02	1,462.7	7,848.9	3,248.8	12,560.4	10,756.8	100%	100%	44%
9/30/01	1,515.9	7,231.7	3,340.8	12,088.4	10,989.9	100%	100%	67%
12/31/00	1,685.8	6,795.8	3,213.2	11,694.8	11,110.6	100%	100%	82%
12/31/99	1,581.0	6,453.8	3,601.2	11,636.0	10,455.5	100%	100%	67%

Source: Washington State Office of the State Actuary

### Solvency Test: PERS Plan 2/3

(dollars in millions)

Accrued Liabilities (Aggregate Cost Method):					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
9/30/04	\$2,055.1	\$1,816.0	\$7,560.0	\$11,431.1	\$11,431.1	100%	100%	100%
9/30/03	1,962.7	1,582.3	7,297.3	10,842.3	10,842.3	100%	100%	100%
9/30/02	1,891.8	1,386.2	7,422.8	10,700.8	10,700.8	100%	100%	100%
9/30/01	2,118.5	1,217.6	7,695.5	11,031.6	11,031.6	100%	100%	100%
12/31/00	2,416.0	1,095.6	7,237.0	10,748.6	10,748.6	100%	100%	100%
12/31/99	2,294.8	968.9	8,107.3	11,371.0	11,371.0	100%	100%	100%

Source: Washington State Office of the State Actuary

### Solvency Test: SERS Plan 2/3

(dollars in millions)

Accrued Liabilities (Aggregate Cost Method):					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
9/30/04	\$175.1	\$216.4	\$1,238.5	\$1,630.0	\$1,630.0	100%	100%	100%
9/30/03	173.8	150.0	1,222.2	1,546.0	1,546.0	100%	100%	100%
9/30/02	174.5	97.4	1,247.1	1,519.0	1,519.0	100%	100%	100%
9/30/01	171.9	49.6	1,250.2	1,471.7	1,471.7	100%	100%	100%
12/31/00	353.4	3.2	1,495.9	1,852.5	1,852.5	100%	100%	100%
12/31/99*	--	--	--	--	--	--	--	--

\* SERS Plan 2/3 became effective on September 1, 2000

Source: Washington State Office of the State Actuary

### Solvency Test: TRS Plan 1

(dollars in millions)

Accrued Liabilities (Entry Age Cost Method):					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	Total (1+2+3) Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
9/30/04	\$985.0	\$7,345.6	\$2,070.7	\$10,401.3	\$8,728.3	100%	100%	19%
9/30/03	1,049.5	6,934.0	2,341.6	10,325.1	9,085.9	100%	100%	47%
9/30/02	1,091.2	6,627.2	2,516.6	10,235.0	9,365.9	100%	100%	65%
9/30/01	1,173.8	6,120.5	2,600.6	9,894.9	9,341.8	100%	100%	79%
6/30/00	1,408.0	5,140.0	3,017.7	9,565.7	9,372.0	100%	100%	94%
6/30/99	1,384.1	4,917.0	3,227.9	9,529.0	8,696.1	100%	100%	74%

Source: Washington State Office of the State Actuary

### Solvency Test: TRS Plan 2/3

(dollars in millions)

Accrued Liabilities (Aggregate Cost Method):					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	Total (1+2+3) Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
9/30/04	\$272.2	\$442.2	\$3,423.7	\$4,138.1	\$4,138.1	100%	100%	100%
9/30/03	264.5	364.5	3,320.0	3,949.0	3,949.0	100%	100%	100%
9/30/02	259.3	314.3	3,226.6	3,800.2	3,800.2	100%	100%	100%
9/30/01	259.0	254.0	3,034.2	3,547.2	3,547.2	100%	100%	100%
6/30/00	331.4	183.2	2,735.1	3,249.7	3,249.7	100%	100%	100%
6/30/99	238.5	156.4	2,512.9	2,907.8	2,907.8	100%	100%	100%

Source: Washington State Office of the State Actuary

### Solvency Test: LEOFF Plan 1

(dollars in millions)

Accrued Liabilities (Entry Age Cost Method):					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	Total (1+2+3) Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
9/30/04	\$103.6	\$3,757.7	\$404.7	\$4,266.0	\$4,665.9	100%	100%	100%
9/30/03	115.2	3,718.5	441.2	4,274.9	4,803.3	100%	100%	100%
9/30/02	126.6	3,648.3	484.1	4,259.0	5,095.0	100%	100%	100%
9/30/01	138.3	3,505.0	509.7	4,153.0	5,368.9	100%	100%	100%
12/31/00	154.2	3,299.3	548.9	4,002.4	5,439.6	100%	100%	100%
12/31/99	165.6	3,313.5	646.2	4,125.3	5,149.7	100%	100%	100%

Source: Washington State Office of the State Actuary

## Solvency Test: LEOFF Plan 2

(dollars in millions)

Accrued Liabilities (Aggregate Cost Method):					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
9/30/04	\$896.4	\$192.7	\$1,858.2	\$2,947.3	\$2,947.3	100%	100%	100%
9/30/03	820.0	137.2	1,783.2	2,740.4	2,740.4	100%	100%	100%
9/30/02	750.8	99.9	1,795.3	2,646.0	2,646.0	100%	100%	100%
9/30/01	686.8	72.1	1,816.7	2,575.6	2,575.6	100%	100%	100%
12/31/00	650.3	55.2	1,753.8	2,459.3	2,459.3	100%	100%	100%
12/31/99	568.8	38.7	1,555.4	2,162.9	2,162.9	100%	100%	100%

Source: Washington State Office of the State Actuary

## Solvency Test: WSPRS Plan 1/2

(dollars in millions)

Accrued Liabilities (Aggregate Cost Method):					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
9/30/04	\$47.0	\$356.6	\$256.4	\$660.0	\$660.0	100%	100%	100%
9/30/03	47.4	335.4	281.2	664.0	664.0	100%	100%	100%
9/30/02	46.9	313.2	328.9	689.0	689.0	100%	100%	100%
9/30/01	46.7	294.8	370.3	711.8	711.8	100%	100%	100%
12/31/00	51.7	270.2	390.1	712.0	712.0	100%	100%	100%
12/31/99	46.3	230.1	161.1	437.5	662.2	100%	100%	100%

Source: Washington State Office of the State Actuary

## Solvency Test: JRS

(dollars in millions)

Accrued Liabilities (Entry Age Cost Method):					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
9/30/04	\$4.9	\$73.9	\$10.2	\$89.0	\$4.3	88%	0%	0%
9/30/03	4.9	74.5	11.4	90.8	6.3	100%	2%	0%
9/30/02	5.1	74.4	12.7	92.2	8.1	100%	4%	0%
9/30/01	5.0	74.1	12.4	91.5	9.6	100%	6%	0%
12/31/00	5.8	72.8	14.5	93.1	9.9	100%	6%	0%
12/31/99	6.2	70.6	17.3	94.1	9.1	100%	4%	0%

This is a relatively small fund administered by DRS which is funded on a pay-as-you-go basis.

Source: Washington State Office of the State Actuary

## Solvency Test: Judges

(dollars in millions)

Accrued Liabilities (Entry Age Cost Method):					Portion of Accrued Liabilities Covered by Assets			
Valuation Date	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability	(1+2+3) Total Accrued Liability	Valuation Assets	(1) Active Members Contributions	(2) Inactive Members Liability	(3) Excess Accrued Liability
9/30/04	\$ --	\$4.7	\$--	\$4.7	\$4.4	n/a	93%	n/a
9/30/03	--	5.2	--	5.2	4.5	n/a	87%	n/a
9/30/02	--	4.7	0.8	5.5	4.7	100%	100%	0%
9/30/01	--	5.3	0.8	6.1	4.9	100%	92%	0%
12/31/00	--	5.3	0.7	6.0	4.7	100%	89%	0%
12/31/99	--	5.7	0.8	6.5	4.4	100%	77%	0%

This is a relatively small fund administered by DRS which is funded on a pay-as-you-go basis.  
Source: Washington State Office of the State Actuary

**Analysis of Selected Experience: PERS Plan 1**  
**Selected Gains and Losses During Years Ended 1999 to 2004**  
**Resulting from Difference Between Assumed Experience and Actual Experience**

(dollars in millions)						
Type of Activity	\$ Gain (or Loss) For Year					
	2004	2003	2002	2001	2000	1999
Investment Gains	(\$321.7)	(\$679.7)	(\$702.2)	(\$422.3)	\$86.2	\$856.5
Salary Gains	106.7	90.8	(14.7)	(16.8)	(38.8)	15.6
Termination of Employment	17.3	16.4	8.5	13.2	12.7	8.4
Return to Work from Terminated Status	(17.8)	(16.6)	(15.5)	(35.2)	(49.1)	(53.1)
Gain (or Loss) During Year from Selected Experience	(\$215.5)	(\$589.1)	(\$723.9)	(\$461.1)	\$11.0	\$827.4

Source: Washington State Office of the State Actuary

**Analysis of Selected Experience: PERS Plan 2/3**  
**Selected Gains and Losses During Years Ended 1999 to 2004**  
**Resulting from Difference Between Assumed Experience and Actual Experience**

(dollars in millions)						
Type of Activity	\$ Gain (or Loss) For Year					
	2004	2003	2002	2001	2000	1999
Investment Gains	(\$295.7)	(\$802.9)	(\$680.5)	(\$430.8)	\$45.9	\$886.7
Salary Gains	326.9	245.5	(12.1)	(21.3)	(76.3)	30.1
Termination of Employment	41.8	41.5	4.2	33.1	41.0	38.4
Return to Work from Terminated Status	(82.5)	(77.9)	(65.8)	(71.8)	(72.4)	(95.4)
Gain (or Loss) During Year from Selected Experience	(\$9.5)	(\$593.8)	(\$754.2)	(\$490.8)	(\$61.8)	\$859.8

Source: Washington State Office of the State Actuary

**Analysis of Selected Experience: SERS Plan 2/3\***  
**Selected Gains and Losses During Years Ended 1999 to 2004**  
**Resulting from Difference Between Assumed Experience and Actual Experience**

(dollars in millions)						
Type of Activity	\$ Gain (or Loss) For Year					
	2004	2003	2002	2001	2000	1999
Investment Gains	(\$45.1)	(\$101.4)	(\$107.2)	(\$52.6)	\$16.0	\$ --
Salary Gains	59.3	5.8	(0.3)	11.3	13.9	--
Termination of Employment	25.6	32.0	6.9	4.8	4.0	--
Return to Work from Terminated Status	(13.3)	(9.5)	(18.0)	(18.9)	(23.3)	--
Gain (or Loss) During Year from Selected Experience	\$26.5	(\$73.1)	(\$118.6)	(\$55.4)	\$10.6	\$ --

\* SERS Plan 2/3 became effective September 1, 2000

Source: Washington State Office of the State Actuary

**Analysis of Selected Experience: TRS Plan 1**  
**Selected Gains and Losses During Years Ended 1999 to 2004**  
**Resulting from Difference Between Assumed Experience and Actual Experience**

(dollars in millions)

Type of Activity	\$ Gain (or Loss) For Year					
	2004	2003	2002	2001	2000	1999
Investment Gains	(\$400.6)	(\$405.9)	(\$409.1)	(\$300.3)	\$496.3	\$552.7
Salary Gains	102.6	(2.1)	13.3	49.4	(70.2)	184.3
Termination of Employment	10.8	14.9	6.0	6.5	5.5	2.8
Return to Work from Terminated Status	(13.7)	(12.1)	(13.8)	(21.8)	(19.1)	(20.6)
Gain (or Loss) During Year from Selected Experience	(\$300.9)	(\$405.2)	(\$403.6)	(\$266.2)	\$412.5	\$719.2

Source: Washington State Office of the State Actuary

**Analysis of Selected Experience: TRS Plan 2/3**  
**Selected Gains and Losses During Years Ended 1999 to 2004**  
**Resulting from Difference Between Assumed Experience and Actual Experience**

(dollars in millions)

Type of Activity	\$ Gain (or Loss) For Year					
	2004	2003	2002	2001	2000	1999
Investment Gains	(\$146.2)	(\$160.1)	(\$159.7)	(\$118.1)	\$164.0	\$187.7
Salary Gains	148.7	1.1	32.7	65.2	(50.8)	107.5
Termination of Employment	79.6	78.5	15.3	5.9	10.1	7.7
Return to Work from Terminated Status	(44.3)	(46.7)	(20.6)	(36.4)	(30.6)	(25.4)
Gain (or Loss) During Year from Selected Experience	\$37.8	(\$127.2)	(\$132.3)	(\$83.4)	\$92.7	\$277.5

Source: Washington State Office of the State Actuary

**Analysis of Selected Experience: LEOFF Plan 1**  
**Selected Gains and Losses During Years Ended 1999 to 2004**  
**Resulting from Difference Between Assumed Experience and Actual Experience**

(dollars in millions)

Type of Activity	\$ Gain (or Loss) For Year					
	2004	2003	2002	2001	2000	1999
Investment Gains	(\$236.5)	(\$422.1)	(\$513.7)	(\$205.1)	\$44.3	\$427.3
Salary Gains	13.7	17.9	9.4	24.7	16.9	0.6
Termination of Employment	0.0	0.0	0.5	0.6	0.5	0.1
Return to Work from Terminated Status	(3.3)	(2.4)	(0.5)	(0.5)	(1.1)	(1.5)
Gain (or Loss) During Year from Selected Experience	(\$226.1)	(\$406.6)	(\$504.3)	(\$180.3)	\$60.6	\$426.5

Source: Washington State Office of the State Actuary



**Analysis of Selected Experience: LEOFF Plan 2**  
**Selected Gains and Losses During Years Ended 1999 to 2004**  
**Resulting from Difference Between Assumed Experience and Actual Experience**

(dollars in millions)

Type of Activity	\$ Gain (or Loss) For Year					
	2004	2003	2002	2001	2000	1999
Investment Gains	(\$108.3)	(\$198.6)	(\$246.2)	(\$99.5)	\$9.1	\$165.4
Salary Gains	101.9	113.9	28.8	39.9	(0.3)	2.0
Termination of Employment	31.7	20.9	0.9	1.1	1.1	0.4
Return to Work from Terminated Status	(0.0)	(21.3)	(2.0)	(2.0)	(2.1)	(4.4)
Gain (or Loss) During Year from Selected Experience	\$25.3	(\$85.1)	(\$218.5)	(\$60.5)	\$7.8	\$163.4

Source: Washington State Office of the State Actuary

**Analysis of Selected Experience: WSPRS Plan 1**  
**Selected Gains and Losses During Years Ended 1999 to 2004**  
**Resulting from Difference Between Assumed Experience and Actual Experience**

(dollars in millions)

Type of Activity	\$ Gain (or Loss) For Year					
	2004	2003	2002	2001	2000	1999
Investment Gains	(\$31.0)	(\$55.6)	(\$68.1)	(\$27.3)	\$5.0	\$53.5
Salary Gains	23.8	11.2	6.9	4.1	3.7	(6.2)
Termination of Employment	(0.6)	(0.9)	0.3	0.1	0.2	0.1
Return to Work from Terminated Status	(0.7)	(0.7)	(0.2)	(0.1)	(0.1)	(0.1)
Gain (or Loss) During Year from Selected Experience	(\$8.5)	(\$46.0)	(\$61.1)	(\$23.2)	\$8.8	\$47.3

Source: Washington State Office of the State Actuary